ENVIRONMENTAL ASSESSMENT
LIVESTOCK GRAZING AUTHORIZATION

EA Number: CA-650-2004-41

Allotment Name: Hunter Mtn. Allotment

Ridgecrest Field Office, BLM

March 6, 2006

Comments, including names and street addresses of respondents, will be available for public review at 300 S. Richmond Rd., Ridgecrest, CA 93555, during regular business hours (7:30 a.m. to 4:00 p.m.), Monday through Friday, except weekends and holidays, and may be published as part of the EA. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

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CHAPTER 1

A. INTRODUCTION

The grazing permit for cattle operation on the Hunter Mountain Allotment expired at the end of the 1998 grazing year (2/28/1999) and 1999 grazing year (2/28/00). This grazing permit was renewed under the authority of Public Law 106-113. The duration of the grazing permit renewal was 10 years based on factors that included rangeland health condition. The grazing permit contained the same terms and conditions as the expiring grazing permits. Public Law 106-113 required compliance with all applicable laws and regulations, which include the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). Following the analysis of environmental impacts these grazing leases may be canceled, suspended or modified, in whole or in part, to meet the requirements of such applicable laws and regulations.

The Washington Office Instruction Memorandum 2003-071 requires that all grazing permits and leases that expired in 1999 and 2000 be "fully processed" by the end of Fiscal Year 2004 (9/30/04). The term "fully processed" permit/lease refers to the completion of an adequate environmental analysis and issuance of a proposed grazing decision in accordance with 43 CFR 4160, and appropriate consultation in accordance with the ESA.

The Bureau of Land Management (BLM) is proposing to issue a 10 year permit on the Hunter Mountain allotment to authorize livestock grazing. The Hunter Mountain allotment encompasses approximately 53,003 acres BLM lands and approximately 917 acres non-BLM lands. The allotment is located in Inyo County, California in the northwestern Mojave Desert between Panamint and Saline Valleys along the western boundary of Death Valley National Park. Elevation range is between 3500 feet in Saline Valley and 7300 feet on Hunter Mountain. Vegetation communities are a mix of Pinyon pine associated with Big sage, & Utah juniper at higher elevations with Creosote bush or Shadscale saltbush at lower elevations. Between the high and low elevations there is a complex vegetation type that includes Big Sage, Low sage, Budsage, Joshua trees, Ephedra, Winterfat, Spiny hopsage, Desert bitterbrush, and Spiny menodora.

B. NEED FOR THE PROPOSED ACTION

The proposed action is needed to authorize grazing in accordance with 43 CFR 4100 and consistent with the provisions of the *Taylor Grazing Act, Public Rangelands Improvement Act, and Federal Land Policy and Management Act*. Action may be required to maintain or improve resource conditions including rangeland health. The permit on this allotment is valid for a 10 year term, ending on 2/28/2010, subject to the terms and conditions therein. The terms and conditions of the permit may be modified according to the findings of this environmental assessment.

C. PLAN CONFORMANCE & RELATIONSHIP TO STATUES, AND REGULATIONS

The proposed action is subject to the California Desert Conservation Area Plan (CDCA Plan) 1980 as Amended (August 1999) and as amended by the Northern and Eastern Mojave Plan Amendment (NEMO), 2002. The proposed action has been determined to be in conformance with these plans as required by regulation (43 CFR §1610.5-3(a)). The proposed action would occur in areas identified for livestock grazing as indicated in the Livestock Grazing Element in the CDCA Plan 1980 (1999), pages 56 to 68. The proposed action is consistent with the land use decisions, and goals and objectives listed in the CDCA Plan.

The allotment meets the Secretary of Interior Approved Rangeland Health Standards as follows

Rangeland Health Standard	Meets Standard	Does Not Meet Standard	Impacts from Livestock Yes or No	Remarks
Soil Permeability	met			
Riparian/Wetland				not applicable
Stream Morphology				not applicable
Native Species	met			

June 11, 1999 assessment determination completed.

Cultural Resources

California BLM has explicit responsibility to manage cultural resources on public lands under the National Historic Preservation Act (NHPA; P.L. 89-665); Federal Land Policy and Management Act (FLPMA; P.L. 94-579); Archaeological Resources Protection Act (ARPA; P.L. 96-95); Native American Graves Protection and Repatriation Act (NAGPRA; P.L. 101-601); American Indian Religious Freedom Act (AIRFA; P.L. 95-431); and other law and implementing regulation. General compliance with these requirements is outlined in the Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act (National PA) and the Protocol Agreement between California BLM and the California State Historic Preservation Officer Regarding the Manner in which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act (Protocol Agreement).

All grazing permits that cover cattle grazing will be subject to compliance with Section 106 of the National Historic Preservation Act following procedures defined in an amendment to the Protocol Agreement (Livestock Grazing Amendment or Amendment). Background site record and literature review will be conducted. Inventory will focus on the intersection between areas that are known or suspected to contain significant cultural resources and areas in which cattle congregate and therefore have the greatest potential to affect cultural resources. An inventory design following the terms of the Protocol Range Amendment will be written for each allotment. Inventory will be carried out following that design. Results of inventory and actions taken to avoid adverse effects to cultural resources will be reported annually to the BLM California State Office and the State of California Office of Historic Preservation. Compliance with Section 106 requirements must be completed within 10 years. Federally recognized and State recognized

Native American tribal groups and individuals are being consulted on issues of concern to them, such as the presence of sacred, traditional use, or other culturally important areas or features. The results of this analysis will be used to modify grazing permits. Stipulations on each grazing permit will be modified to reflect compliance with the Livestock Grazing Amendment. All cultural resources will be subject to review and evaluation to identify effects resulting from grazing and related activities. All cultural resources will be afforded protection or mitigation consistent with law, policy, and the Protocol Livestock Grazing Amendment.

Special Status Plant Species:

It is BLM's policy to carry out management, consistent with the principals of multiple use, for the conservation of Special Status Plant Species and their habitats and will ensure that actions authorized, funded, or carried out do not contribute to the need to federally list any of the species as threatened or endangered.

Wilderness

A portion of the Malpais Mesa Wilderness area is found in the Hunter Mountain Allotment. Grazing activities are currently permitted in this wilderness area. However, the area is grazed infrequently because of lack of water. For the purpose of this analysis, the proposed action contains no impacts that are expected to occur above those impacts already occurring under current grazing management.

The proposed action is consistent with the California Desert Protection Act of 1994: "CDPA (P. L. 104-433, Section 103.(c)): "Livestock.—Within the wilderness areas designated under Section 102, the grazing of livestock, where established prior to the date of enactment of this Act, shall be permitted to continue subject to such reasonable regulations, policies, and practices as the Secretary deems necessary, as long as such regulations, policies, and practices fully conform with and implement the intent of Congress regarding grazing in such areas as such intent is expressed in the Wilderness Act and section 101(f) of Public Law 101-628."

In general, the wilderness act prohibits roads, motorized equipment, mechanical transport, landing of aircraft, and placement of new structures and installations. The wilderness areas are managed primarily to preserve natural features. For allotments containing wilderness areas, allotments are required to be managed under the provisions of the 1964 Wilderness Act and enabling legislation for the wilderness area.

Congress provided additional guidance for managing livestock within wilderness areas through the Congressional grazing guidelines found in the 1980 Colorado wilderness legislation. Regulations to mange livestock in wilderness is found in 43 CFR 6300. For allotments within Wilderness Study Areas, they shall be managed consistent with the direction found in the Interim Policy Management Handbook 8550.

Water Quality

The federal Clean Water Act (CWA) delegates to the states the authority to regulate certain activities that may affect water quality. The California State Porter-Cologne Act (CA Water Code ' 13140-13143) establishes the State Water Quality Control Board and nine Regional Water Quality Control Boards (RWQCB). It directed the preparation of Basin Plans and provided guidance on factors to include in the plans. It also implemented the Federal Clean Water Act. The project is

within the Lahontan Region and under the jurisdiction of the Lahontan RWQCB. The RWQCB has prepared a Basin Plan which includes beneficial uses and water quality standards.

Air Quality

The Hunter Mountain Allotment falls within the jurisdiction of the Great Basin Unified Air Pollution Control District (GBUAPCD). The GBUAPCD has state air quality jurisdiction over the area including the Hunter Mountain Allotment. The air district has rules which apply to most emissions including fugitive dust emissions.

Federal Conformity: Projects within federal air quality nonattainment areas have an additional burden in that federal agencies must make a determination that its actions conform to the State Implementation Plans (SIP) before the action is taken (Section 176 (c) of the Clean Air Act (CAA), as amended (42 U.S.C. 7401 et seq.) and regulations under 40 CFR part 93 subpart W). These authorities address the conformity of general federal actions to SIPs. These authorities state, "No department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan". Regulations at 40 CFR Part 93.153 Applicability includes a number of exceptions to the requirements of the conformity rules including the following:

> "(c) The requirements of this subpart shall not apply to the following Federal actions:
> (iii) Continuing and recurring activities such as permit renewals where activities will be similar in scope and operation to activities currently being conducted."

Regulations: For livestock grazing purposes, the handling of sensitive species that may be found on the allotment are subject to BLM regulations at 43 CFR 4100 (grazing regulations).

Plans: Northern and Eastern Mojave Plan (2002) (Habitat Conservation Plan/CDCA Plan amendment): BLM, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), county and city governments, various interest groups, the U.S. military, and a number of public lands stakeholders participated in developing this plan. It is an amendment to the CDCA Plan. The Northern & Eastern Mojave Plan is a local bio-regional planning effort addressing State and federally-listed species.

CHAPTER 2

PROPOSED ACTION AND ALTERNATIVES

A. CURRENT MANAGEMENT

The current management consists of authorizing cattle grazing on the Hunter Mountain allotment, under one grazing permit, for a term of ten years. The current season of use and permitted use, including management actions and stipulations would be included in this grazing permit.

1. Livestock Numbers and Season of Use

Allotment	Number	Kind	Class	From	To	AUMs
Hunter	1	Cattle	Cow/calf	3/1	6/30	4
Mountain	1	Cattle	Cow/calf	11/20	2/27	3

2. Livestock Management

Hunter Mountain Allotment is a perennial cattle grazing allotment made up of approximately 53,920 acres, of which 917 acres are non-BLM land and 53,003 acres are BLM land. The Malpais Mesa Wilderness has 17,501 acres within the allotment boundary. The allotment is located south of Saline Valley, on the west side of Hunter Mountain. The grazing occurring in the allotment amounts to seasonal drift and trailing across. The main area of grazing occurs within Death Valley National Park. The grazing which occurs within the BLM allotment results from trailing the cattle to and from the NPS grazing allotment and cattle drift off the NPS allotment during the winter grazing season. The amount of drift is related to the available moisture in the area at the time of grazing.. Since, BLM's Hunter Mountain allotment contains no available water, only during years when snow is available or after significant rains do the livestock tend to drift more into the allotment. (Allotment Map, see Appendix 1)

Forage consists of *Sphaeralcea sp.* (Mallow), *Atriplex confertifolia* (Shadscale), *Menodora spinescens*, and *Eriogonum sp.* (Buckwheat). Historically the allotment covered a greater extent but the eastern half of the allotment was incorporated into Death Valley National Park in 1994. Grazing has not been authorized for several years on the BLM allotment and there is no natural water to support grazing. Occasionally there is some drift of cattle from the Death Valley allotment on to the BLM, but this is very incidental.

3. Range Improvements

There are no range improvements on this allotment.

4. Measures to Maintain or Achieve Standards (Terms and Conditions of Permit)

None

5. Monitoring

The rangeland monitoring of this allotment would be conducted as it is currently in three categories. These categories would be 1) short term monitoring, 2) long term monitoring, and 3) interpreting the indicators of rangeland health through an allotment assessment.

The use of short term monitoring is a tool to gauge the cause and effect of the current authorization. This type of monitoring consists of actual use, current climatic conditions and the collection of utilization data. This type of data would be collected on a yearly basis at minimum. The collection of utilization data should be triggered by the growing season of key species and correlate with the phenology of key species.

The collection of long term monitoring data typically occurs every four to five years. The collection of trend data, both photo and measured trend is used to determine long term cause and effect of long term grazing strategies. The measurement of trends is accomplished through the collection of frequency and cover data at key areas.

The collection of indicators of rangeland health information is a qualitative method that requires the formation of an interdisciplinary team that makes observations of various indicators to determine the health of rangelands and the achievement of regional standards of rangeland health. This process is also considered a long term, and typically occurs every 10 years.

B. PROPOSED ACTION

The proposed action is the same as the current management, with the following additions.

1. Regional Standards and Guidelines

With the approval of the Northern and Eastern Mojave Desert Plan Amendment in December 2002 the following Standards and Guidelines are incorporated into the grazing permit and management practices. Regional Standards and Guidelines (Northern and Eastern Mojave Desert Management Plan, Appendix P, August 2002)

Standards:

Soil

Soils exhibit infiltration and permeability rates that are appropriate to soil type, climate geology, landform, and past uses. Adequate infiltration and permeability of soils allow accumulation of soil moisture necessary for optimal plant growth and vigor , and provide a stable watershed as indicated by:

- Canopy and ground cover are appropriate for the site
- There is diversity of plant species with a variety of root depths
- Litter and soil organic matter are present at suitable sites
- Maintain the presence of micro biotic soil crusts that are in place
- Evidence of wind or water erosion does not exceed natural rates for the site
- Hydrologic and nutrient functions maintained by permeability of soil and water infiltration are appropriate for precipitation

Native Species

Healthy, productive and diverse habitats for native species, including special status species (Federal T&E, federal proposed, federal candidates, BLM sensitive, or California State T&E, and CDD UPAs) are maintained in places of natural occurrences as indicated by:

- Photosynthetic and ecological processes continue at levels suitable for the site, season, and precipitation regimes
- Plant vigor, nutrient cycle, and energy flow are maintaining desirable plants and ensuring reproduction and recruitment
- Plant communities are producing litter within acceptable limits
- Age class distribution of plants and animals are sufficient to overcome mortality fluctuations
- Distribution and cover of plant species and their habitats allow for reproduction and recovery from localized catastrophic events
- Alien and noxious plants and wildlife do not exceed acceptable levels
- Appropriate natural disturbances are evident
- Populations and their habitats are sufficiently distributed to prevent the need for listing special status species

Riparian/Wetland and Stream Function

Wetland systems associated with subsurface, running, and standing water, function properly and have the ability to recover from major disturbances. Hydrologic conditions are maintained as indicated by:

- Vegetative cover will adequately protect banks, and dissipate energy during peak water flows
- Dominant vegetation is an appropriate mixture of vigorous riparian species
- Recruitment of preferred species is adequate to sustain the plant community
- Stable soils store and release water slowly
- Plants species present indicate soil moisture characteristics are being maintained
- There is minimal cover of invader/shallow-rooted species, and they are not displacing deep-rooted native species
- Maintain shading of stream courses and water sources for riparian dependent species
- Stream is in balance with water and sediment being supplied by the watershed
- Stream channel size and meander is appropriate for soils, geology, and landscape
- Adequate organic matter(litter and standing dead plant material) is present to protect the site and to replenish soil nutrients through decomposition

Water Quality

Water quality will meet state and federal standards including exemptions allowable by law as indicated by:

- Dissolved oxygen levels, aquatic organisms and plants (e.g., macro invertebrates, fish and algae) indicate support of beneficial uses
- Chemical constituents, water temperature, nutrient loads, fecal coliform and turbidity are appropriate for the site or source

- Best Management Practices will be implemented

Air Quality

Air quality will meet State and Federal standards including exemptions allowable by.

- Best Management Practices will be implemented

GUIDELINES FOR GRAZING MANAGEMENT

Resource conditions of each allotment will be routinely assessed to determine if Public Land Health Standards are being met. In those areas not meeting a Standard, monitoring processes will be established if they do not presently exist to monitor indicators of health until the Standard or resource objective has been attained. Activity plans for other uses or resources that overlap an allotment could have prescribed resource objective that may further constrain grazing activities, e.g., ACEC Plans. In an area where a Standard has not been met, the results of monitoring the modification or implementation of grazing management actions will be reviewed annually. During the final phase of the assessment process, the Determination will schedule the next assessment of resource conditions. A livestock trailing network, grazed plants, livestock facilities, and animal waste are expected impacts in all grazing allotments and will be considered during analysis of the assessment/monitoring process. To attain Standards and resource objectives, the best available science will be used to determine appropriate grazing management actions. Cooperative funding and assistance from other agencies, individuals, and groups will be sought to collect prescribed monitoring data for indicators of each Standard.

- Facilities are to be located away from riparian-wetland areas wherever they conflict with achieving or maintaining riparian-wetland functions.
- The development of springs and seeps or other projects affecting water and associated resources will be designed to protect the ecological functions and processes of those sites.
- Grazing activities at an existing range improvement that conflict with achieving proper functioning conditions (PFC) and resource objectives for wetland systems (lentic, lotic, springs , adits, and seeps) will be modified so PFC and resource objectives can be met, and incompatible projects will be modified to bring them into compliance. The BLM will consult, cooperate, and coordinate with affected interests and livestock producer(s) prior to authorizing modification of existing projects and initiation of new projects. New range improvement facilities are to be located away from wetland systems if they conflict with achieving or maintaining PFC and resource objectives.
- Supplements will be located well away from wetland systems.
- Management practices will maintain or promote perennial stream channel morphology (e.g., gradient, width/depth ratio, channel roughness, and sinuosity) and functions that are appropriate to climate and landform.
- Grazing management practices are to meet State and Feral water quality standards. Where impoundments (stock ponds) and troughs that have a sustained discharge yield of less than 200 gallons per day to surface or groundwater are exempted from meeting State drinking water standards per SWRCB Resolution Number 88-63.
- In the California Desert Conservation Area all wildfires in grazing allotments will be suppressed. However, to restore degraded habitats infested with invasive weeds (e.g., tamarisk) prescribed burning may be utilized as a tool for restoration on a case-by-case

basis. Prescribed burns may be used as a management tool for chaparral plant communities in the South Coast Region, where fire is a natural part of the regime.

- When climatic conditions and space allow, seedling establishment of native species will be promoted.
- Grazing on designated ephemeral (annual and perennial) rangeland is allowed to occur only if reliable estimates of production have been made, an identified level of annual growth or residue to remain on site at the end of the grazing season has been established, and adverse effects on perennial species are avoided.
- During prolonged drought, range stocking will be reduced to scientifically based carrying capacity, based on climatic conditions. Livestock utilization of key perennial species on year-long allotments will be checked about March 1 when the Palmer Severity Drought Index/Standardized Precipitation Index indicates dry conditions are expected to continue.
- Through the assessment process or monitoring efforts, the extent of invasive and/or exotic plants and animals will be recorded and evaluated for future control measures. Methods and prescription will be implemented, and an evaluation will be completed to ascertain future control measures.
- Restore, maintain or enhance habitats to assist in the recovery of federally listed threatened and endangered species. Restore, maintain or enhance habitats of special status species including Federal proposed, Federal candidates, BLM sensitive, or California State T&E to promote their conservation.
- Grazing activities will support biological diversity across the landscape, and native species and micro biotic crusts are to be maintained.
- Experimental and research efforts will be encouraged to provide answers to grazing management and related resource concerns through cooperative and collaborative efforts with outside agencies, groups, and entities.

C. NO GRAZING ALTERNATIVE

This alternative would not authorize the permit to be renewed. Grazing would stop after June 30, 2007. As a result, grazing would not continue on the Hunter Mountain allotment. This is to be a permanent change in land use suitability. The BLM would initiate a process in accordance with the 4100 regulations to permanently eliminate grazing on the allotment.

CHAPTER 3 ENVIRONMENTAL ANALYSIS

A. AIR QUALITY

a. Affected Environment

Air quality throughout the allotment area is generally good. There are, however, times that portions of the area have not meet air quality standards due to locally generated and/or transported in pollutants. Currently portions of the project area are classified as nonattainment areas for PM_{10} under state standards and National Ambient Air Quality Standards (NAAQS). The area is unclassified for the new $PM_{2.5}$ standard. A portion of the Hunter Mountain Allotment falls within the USEPA designated Owens Valley PM_{10} Planning Area.

An implementation plan has been prepared for the Owens Valley PM_{10} planning area which identify sources of PM_{10} emissions and control measures to reduce emissions. Livestock grazing is not specifically addressed in the PM_{10} plans. The emphasis in the Owens Valley plan is control of emissions from Owens Lake which accounts for 99.9% of the PM emissions.

b. Environmental Consequences

1. Impacts of Proposed Action (Same as Current Management

Direct and Indirect Impacts:

Fugitive dust could occur due to the soil disturbance as a result of the trampling action of the cattle when soil moisture levels are low. Support vehicle use on the access roads will generate small amounts of PM_{10} emissions throughout the grazing area. PM_{10} emissions as a result of the existing grazing activities are estimated to be well below the 100 ton significant level in the allotment. Grazing related PM_{10} emission levels are not considered significant in the PM_{10} SIPs. Ruminant animals emit methane gas which is a precursor emission for ozone. Ozone precursor emissions are expected to be minimal. No significant offsite impacts are anticipated. The existing grazing use doesn't exceed the deminimus emission levels and is exempt from conformity determination (40 CFR Part 93.153 (iii)) which exempts continuing and recurring activities such as permit renewals where activities will be similar in scope and operation to activities currently being conducted. As a result no further conformity analysis or determination is necessary.

Irreversible and irretrievable commitment of resources

No irreversible or irretrievable commitment of air resources would result.

Residual Impacts

Residual impacts to air quality include continued dust emissions from vehicle activity and grazing operations and hydrocarbon and combustion emissions from ruminant animals and internal combustion engines during the grazing operations. No long term residual adverse effects on air resources are expected from the Proposed Action. The impacts are expected to occur during the duration of the existing grazing. Once the action is completed, the site should return to pre grazing emission levels.

Cumulative Impacts

The cumulative effect area for air resources for the Proposed Action is the Owens Valley PM_{10} planning area. The Owens Lake Bed is identified as the major source of PM10 emissions in the PM10 planning area and it is the target of all of the control measures. The expected emission levels are within the levels in the attainment demonstrations in the SIPs and the cumulative NAAQS 24 hour and one year $PM_{2.5}$ and PM_{10} emission standards and the one and eight hour ozone emission standards and are not likely to result in or contribute to instances where the National Ambient Air Quality Standards are exceeded.

Recommended mitigation measures

None

2. No Grazing

No impacts to air would occur as a result of grazing activities.

c. REFERENCES

Listed at the end of the document

B. AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

a. Affected Environment

The proposed action and the alternatives would have no affect on ACEC's because there are no such designated areas in the allotment.

C. BIOLOGICAL SOIL CRUSTS

a. Affected Environment

Biological soil crusts are likely to occur over most of the Allotment. Soils with these crusts are often referred to as cryptogamic soils. The open space between higher plants is not generally bare of all life. Highly specialized organisms make up a surface community consisting of cyanobacteria, green algae, lichens, mosses, microfungi and other bacteria. The cyanobacteria and microfungal filaments weave through the top few millimeters of soil holding loose soil particles together forming a biological crust which stabilizes and protects soil surfaces. The biological crusts aid moisture retention, fix nitrogen, and may discourage the growth of annual weeds. Below the surface, the soil flora grow various rhizines, hyphae and filaments that further bind the soil together. Most of the biological crust organisms make their growth during cool moist conditions.

b. Environmental Consequences

1.Impacts of Current Management AND Proposed Action:

Direct and Indirect Impacts:

It is thought that the low to mid-elevation arid ecosystems in the west developed with low levels of surface disturbance. As a result the crusts in these areas are easily disturbed by trampling by grazing animals which apply compressional and shear forces. The crust response to these disturbances is highly variable. Moisture and burial are two important factors relating to the degree of impact. Moist crusts are better able to withstand disturbances than dry soils. Many of the biological crust species are not mobile and cannot survive burial. This results in the loss of most mosses, lichens, green algae and small cyanobacteria. The large, filamentous cyanobacteria can move 5mm per day if it is wet and can survive if it is wet. The general result of burial is a greatly simplified crustal community due to the loss of species. Grazing in the late winter and spring can reduce both species diversity and cover of biological crusts because the soils are dry. These allotments have been grazed for over one hundred years and it is likely that continued grazing would not make any appreciable additional changes in the biological crust species diversity.

Irreversible and Irretrievable commitment of Resources:

Biological soil crusts can recover from disturbance over time. The time factor is dependent upon the degree of displacement and soil moisture. In moist conditions partial recovery of the mobile species can occur in days. More complete recovery of all species on a site can be from five to seventy years.

Residual:

The same as Direct and Indirect Impacts

Cumulative Impacts:

The long term result of continued impacts is a greatly simplified crustal community due to the loss of species.

Recommended Mitigation:

None

2. Impacts of Proposed Action and Current Management:

Similar to existing situation

3. Impacts of No Grazing

Direct and Indirect Impacts:

A slow recovery of the less mobile crust species would occur.

Irreversible and Irretrievable commitment of Resources:

Biological soil crusts can recover from disturbance over time. The time factor is dependent upon the degree of displacement and soil moisture. In moist conditions partial recovery of the mobile species can occur in days. More complete recovery of all species on a site can be from five to seventy years.

Residual:

Same as direct impacts

Cumulative Impacts:

The long term result of removing grazing impacts is a more complex crustal community due to species recovery.

Recommended Mitigation:

None

D. CULTURAL RESOURCES

a. Affected Environment

The Proposed Action allows for only 3 or 4 AUMs per grazing season and is intended to cover incidental straying of cattle from the adjacent allotment and driving the cattle across the Hunter Mountain allotment to access the adjacent allotment. There are no natural water sources and no range developments on the allotment. There are no identified areas of cattle congregation. Use of the allotment at this level is not expected to impact prehistoric or historic resources

b. Environmental Consequences

1. Impacts of Proposed Action (Same as Current Management)

No impacts to cultural resources are expected

2. No Grazing

No direct impacts would occur. Some kinds of impacts that occurred when the allotment was still grazed, such as damage from eroding soils, may continue after grazing has been discontinued unless remediative action is taken. This alternative would also eliminate an activity that may be considered a historic use in the area and may have adverse effects on the traditional values of those engaged in the activity.

3. Cumulative Impacts

The cumulative impacts of grazing over the past hundred years or so may have caused degradation or complete destruction of some resources in areas in which the intensity of use was high. These

impacts may continue if grazing impacts have caused soil erosion and other circumstances that will continue even though grazing no longer occurs

c. Consultation

Consultation with the State Historic Preservation Officer will be required as outlined in the grazing appendix to the state Protocol Agreement and will largely take the form of annual reports on progress and measures taken to avoid, eliminate, or mitigate impacts to cultural resources. Individuals or groups other than Native Americans who may have traditional or cultural concerns about the area will be contacted as they are identified or as they identify themselves to BLM.

d. Reference

Listed at the end of the document

E. ENVIRONMENTAL JUSTICE

a. Affected Environment

The grazing allotment being analyzed is located in rural Inyo County. The rural areas of this county are typically occupied by moderate to low-income households. The lessees that hold the grazing leases for the allotments being analyzed typically have moderate incomes. Seasonal laborers that may be hired by the lessees generally come from low-income households.

b. Environmental Consequences

1. Impacts of Proposed Action and Current Management

The implementation of the proposed action would have an affect but not a disproportionate affect on low-income or minority populations living on or near the allotments being analyzed.

The grazing of livestock in rural Inyo County has been a common practice for over 100 years. Typically, ranching has been performed by persons of low to moderate income, and may or may not be considered a minority. There are no Native American communities on or near any of the allotments being analyzed.

2. No Grazing

Under the no grazing alternative there would be an affect but not a disproportionate affect with respect to low-income or minority populations. The loss of livestock grazing in rural Inyo County could result in the loss of seasonal employment to a very small component of low-income or minority populations.

3. Cumulative Impacts

There are no known cumulative impacts to low-income or minority populations as a result of current grazing practices (proposed action). The no grazing alternative may have some cumulative present and future impacts to a very small component of low-income or minority populations.

c. Consultation

All affect Native American tribes with traditional ties to the lands within the allotments being analyzed would be consulted.

F. FARMLANDS, PRIME OR UNIQUE

a. Affected Environment

The proposed action and alternative would have no affect on unique or prime farmlands because there are no lands desginated as such in the allotment.

G. FLOOD PLAINS

a. Affected Environment

The proposed action and alternatives would have no affect on flood plains because there are no flood plains on the allotment.

H. INVASIVE, NON-NATIVE SPECIES

a. Affected Environment

There are no known populations of noxious weeds in the Hunter Mountain allotment

b. Environmental Consequences

1. Impacts of Proposed Action (Same as Current Management)

Direct and Indirect Impacts:

It is unknown what role the cattle would have in maintenance, spread or introductions of new noxious weeds. Due to the low numbers of cattle using the area, the impact is expected to be small.

Irreversible and Irretrievable commitment of Resources:

The introduction of exotic species, especially noxious weeds is very difficult if not impossible to reverse. Some of the noxious weeds have the potential to totally dominate a site.

Residual:

N/A

Cumulative Impacts:

Weed encroachment is a regional and national problem.

Recommended Mitigation:

Continue to inventory for weed populations and use an integrated approach for management if any are found

2. No Grazing

Direct and Indirect Impacts:

Grazing would cease to be a factor in weed management in the area.

Irreversible and Irretrievable commitment of Resources:

The same as Direct and Indirect Impacts

Residual:

The same as Direct and Indirect Impacts

Cumulative Impacts:

Same as Proposed Action.

Recommended Mitigation:

Same as Proposed Action

c. References

Listed at the end of the document

I. NATIVE AMERICAN CONCERNS

a. Affected Environment

Fowler et al (1995) identified the area contained within the Hunter Mountain Allotment as being within the traditional homeland of the Timbisha Shoshone, although specifically identified areas of importance, based upon interviews with a number of Timbisha Shoshone tribal members, lay to the east of the allotment boundary beyond the Nelson Range. Hunter Mountain, an area of great importance to the Timbisha Shoshone, is no longer within the allotment since loss of a portion of the allotment to Death Valley National Park. The Shoshone would have used the area for collection of important plant resources, hunting, and other resource related uses. The Timbisha Shoshone have been contacted and will be consulted regarding contemporary concerns for the area.

b. Environmental Consequences

1. Impacts of Proposed Action and Current Management

Impacts to sacred and traditional uses and other concerns will be identified by Native Americans through consultation.

2. No Grazing

Cessation of grazing, would result in cessation of any direct on-going impacts that may be occurring. There may still be effects resulting from permanent damage to resources or areas of concern that will remain even after grazing ceases. These matters must be identified by Native Americans with knowledge of the area.

3. Cumulative Impacts
Grazing existed on the allotment for so long that impacts to Native American values may have had a cumulative effect, which may continue even if grazing drops to the minimal level of the Proposed Action. Some resources of importance may have been eliminated from the environment or seriously degraded, such as populations of native plants. Areas with sacred values may have been permanently compromised by cattle grazing and attendant activity. These matters must be identified by Native Americans with knowledge of the area.

c. Consultation

Consultation with Native Americans is required under the Protocol Agreement and under various laws and executive orders. Federally recognized and state recognized tribes and individuals whose traditional homelands may be affected by cattle grazing on these allotments have been contacted. Consultation will continue with those who identify concerns about the area. The Timbisha Shoshone tribe has been contacted but consultation has not yet begun.

e. References

References listed at the end of the document

J. RECREATION

a. Affected Environment

The public lands in the allotment provide a wide range of outdoor recreational opportunities and experiences including backpacking/hiking, horseback riding, mountain biking, camping, hunting upland game birds, nature study, ATV and motorcycle riding, four-wheel driving, rock hounding/ mineral collecting, rock climbing and target shooting. Annually a Special Recreation Permit for use within the borders of the allotment has been issued to a promoter of dual sport motorcycle tours. Additionally along the western boundary approximately in the center of the allotment sits the Malpais Mesa Wilderness area. Refer to the Wilderness section for details.

b. Environmental Consequences

1. Impacts of Proposed Action and Current Management

While participating in casual and permitted recreational pursuits, participants may encounter herds of cattle on the public lands. This would be a rare instance since cattle only trail across the allotment at specific seasons of the year. The sighting of livestock grazing on the open range is

often very intriguing and of interest to visitors and enhances ones recreational experience. There are no range improvements on this allotment that would impede recreational pursuits.

2. No Grazing

The elimination of grazing would have little effect on recreational opportunities in the region except for eliminating the experience of seeing cattle on the open range of the "Wild West.".

3. Cumulative Impacts

No cumulative impacts would be experienced by participants while partaking of recreational opportunities within the allotment.

K. SOCIAL AND ECONOMIC VALUES

a. Affected Environment

The rancher's economic livelihood is affected because this allotment provides access to an allotment on National Park Service land that provides forage and water for his cattle. The few days that he uses the allotment to trail cattle are significant to his operation.

b. Environmental Consequences

1. Impacts of Proposed Action and Current Managment

The proposed action essentially allows the rancher to continue to trail cattle through the allotment to and from an allotment located on the National Park Service that has water and forage for his cattle. It is economically significant to the rancher that he continue to be allowed to do this to keep his operation viable.

2. No Grazing

If there were no grazing on the allotment the rancher would be cut off from his allotment on National Park Service land and his livelihood would be jeopardized.

3. Cumulative Impacts

The cumulative impacts on the proposed action are that the rancher may continue to perpetuate his ranching operation and lifestyle with minimal affects on the environment.

The cumulative impacts of no grazing would be that it places an economic hardship on the rancher.

L. SOILS

a. Affected Environment

Soils in the area are generally poorly developed, well drained and coarse textured. The soil depth ranges from deeper alluvial materials to very shallow or non existent over the rocky substrate. The

soils are susceptible to accelerated erosion from wind and water especially when the surface has been disturbed. Much of the soil has been subject to periodic disturbance due to livestock grazing for 140 years. Additional soil disturbance is occurring as a result of vehicular use on existing routes in the general area.

Soil stability was evaluated in the Hunter Mountain Allotment as part of the Rangeland Health evaluations. Four upland sites were evaluated and the soil surface factor (SSF) in the allotment averaged 5.4 which is in the stable range. No soil impacts were noted as a result of cattle use.

c. Environmental Consequences

1. Impacts of Proposed Action and Current Management

Direct and Indirect Impacts:

The general grazing use in the Hunter Mountain Allotment is an extensive use with the animals and their hoof action spread over large areas. This use can be best characterized as a series of small impacted spots (hoof marks) with large areas of interspace. This use would not result in the loss of vegetative cover or increased compaction or reduced infiltration rates. It would result in little increase in wind and /or water erosion potential over the background levels. Wind and water erosion rates are not expected to increase above current levels as a result of the Proposed Action.

Irreversible and Irretrievable commitment of Resources:

No irreversible and irretrievable soil losses due to the Proposed Action are expected.

Residual:

None

Cumulative Impacts:

The existing grazing activities would contribute little to any soil losses occurring on a regional basis. Most of the regional erosion problems come from poor drainage on and adjacent to roads and rights-of ways.

Recommended Mitigation:

None

2. No Grazing

Direct and Indirect Impacts:

Elimination of grazing would eliminate any additional impacts to soils as a result of cattle grazing

4. Cumulative Impacts

Identify any cumulative impacts from past, present, and reasonably foreseeable public or private actions including any actions on non federal lands. Note any differences among the alternatives.

c. References

Listed at the end of the document

M. SPECIAL STATUS PLANTS:

a. Affected Environment

Several special status plant species are known in the Hunter Mountain Allotment area. These include Jaeger's caulostramina (*Caulostramina Jaegeri*), Ripley's cymopterus (*Cymopterus ripleyi*), Inyo laphamia (*Perityle inyoensis*) and hanaupah laphamia (*Perityle villosa*).

b. Environmental Consequences

Impacts of Proposed Action and Current Management

Direct and Indirect Impacts:

None

.

Irreversible and Irretrievable commitment of Resources:

None

Residual:

None

Cumulative Impacts:

None.

Recommended Mitigation:

None

Impacts of No Grazing:

No special status plants will be impacted by this alternative.

c. References:

Listed at the end of the document

N. WASTE, HAZARDOUS OR SOLID

a. Affected Environment

Detailed surveys of hazardous or solid wastes have not been undertaken on this allotment. The BLM maintains no records of reportable spills in the allotment. Although use of motorized vehicles and equipment by the livestock operator may have resulted in periodic and scattered spills or releases of fuel and petroleum products in the allotment, none are documented. For this reason we believe that the proposed action and the alternatives would have no affect on hazardous or solid waste.

O. WATER QUALITY, SURFACE AND GROUND WATER

a. Affected Environment

The Hunter Mountain Allotment is located on the western edge of the Mojave Desert. The climate and annual precipitation is typical for the desert environment. Large variations in yearly perception volumes are common. Most of the perception comes in the form of rain at the lower elevation and many times snow at the highest elevations. Most of the perception falls between November and mid March. Summer rain events as a result of mountain thunder storms are not uncommon. Storm drainage through most of the allotment flows to the south, then northwest into Owens Lake. A small portion of the Drainage is into Saline Valley. There are no riparian areas or developed water in the allotment.

The U.S. Geological Survey identified portions of two large watersheds in the allotment. These are the Eureka-Saline Valley basin and the Owens Lake basin. The Final Unified Watershed Assessment (1998) classified the Owens Lake basin as a category 1 (impaired) priority watershed and the Eureka-Saline Valley basin as a category 1 (impaired) low priority watershed.

The Lahontan Basin Plan identifies beneficial uses (chapter 2) and water quality objectives (chapter 3) for surface water. The basin plan lists specific beneficial uses as standards to maintain or meet. For many of the sources, the plan states that beneficial uses includes municipal, agricultural, ground water recharge, recreation 1 & 2, warm water fisheries, cold water fisheries and wildlife. As there is no surface water in the allotment most of the provisions have no application.

b. Environmental Consequences

1. Impacts of Proposed Action (Same as Current Management)

Direct and Indirect Impacts:

As there is no surface water in the allotment, there is no impact to water resources from the proposed action.

Irreversible and Irretrievable commitment of Resources:

None

Residual:

Same as direct impacts

Cumulative Impacts:

None

Recommended Mitigation:

None

2. No Grazing

No impacts to water resources would occur due to cattle grazing.

c. **References**

Listed at the end of the document

P. WETLANDS/RIPARIAN ZONES

a. Affected Environment

No known riparian areas exist in the Hunter Mtn. Allotment. Small springs and seeps that sustain limited numbers of wildlife may occur in scattered locations, but these have not been identified by the BLM. Cattle do not use any of these potentially occurring springs.

b. Environmental Consequences

1. Impacts of Proposed Action and Current Management

None

2. No Grazing

Elimination of grazing would not have no effect on the small seeps and springs that may occur within the allotment.

3. Cumulative Impacts

None

Q. WILD AND SCENIC RIVERS

a. Affected Environment

The proposed action and alternatives would have no affect on wild and scenic rivers because there are no rivers so designated on the allotment.

R. WILDERNESS

a. Affected Environment

Approximately 17,501 acres or 33% of the Hunter Mountain allotment lies within the Malpais Mesa Wilderness Area. This 32,360 acre wilderness is located just south of the Inyo Mountains and features a large, rugged mesa of volcanic origin, flanked by steep cliffs on the west and gently sloping bajadas on the east. Vegetation ranges from creosote, low desert shrubs and grasses on lower elevations to Joshua trees and fishhook cactus at mid-upper elevations. The only known special status plant is an upland species of parsley (*Cymopterus ripleyi*). No noxious weed populations are known to be present.

Naturalness, solitude, and opportunities for primitive and unconfined recreation are good to excellent, despite past mining activity. The mesa top with its scattered stands of Joshua trees feels extremely isolated, like an island in the sky. The area supports nesting and foraging habitat for golden eagles. Primitive recreation includes excellent hiking and bird watching opportunities.

The area has been very lightly grazed (0-20% use) in the past. The area has no water. As a consequence, the wilderness portion of the allotment functions principally as a drift area with occasional ephemeral use depending upon the condition of the available ephemeral forage. Most grazing on the allotment has occurred on the adjacent flat now within Death Valley National Park. This area was transferred to the Park at the same time the Malpais Mesa Wilderness was designated in October of 1994. At the time of wilderness designation, the rancher was allotted 3 active AUMs for the winter grazing season and 4 active AUMs for the spring grazing season. Current livestock use-levels remain the same. Within wilderness, the allotment has no maintenance needs, no motorized access needs, nor are there any sites needing specialized resource protection. There are no range or wildlife developments. Two proposed water haul sites along the eastern boundary of the wilderness area were never developed. The one exclosure is located outside of wilderness on NPS lands.

There is no wilderness management plan for this wilderness area that addresses grazing.

b. Environmental Consequences

1. Impacts of Proposed Action and Current Management

The proposed action is to continue grazing the area at current use-levels. There are no proposed range or wildlife improvements associated with grazing for this area. Impacts of grazing on wilderness values at such low levels are small. Some diminishment of the area's naturalness will occur during seasons of active livestock use from trampling, cow pies, and the grazing of vegetation. The area should be carefully monitored for the establishment and spread of noxious weeds and for any adverse impacts associated with grazing on populations of the upland species of parsley, a special status plant. Appropriate action would need to be taken if such things were found to be occurring.

2. No Grazing

The impacts of no grazing on wilderness would be to improve naturalness, particularly during the seasons of normal cattle use. The threat of noxious weed establishment and dispersal and of adverse impacts to the upland parsley would also be largely eliminated by the cessation of grazing.

3. Cumulative Impacts

Under the proposed action, impacts would not be expected to accrue beyond what they are now unless rangeland health standards could not be met with even the minimal allotted amount of grazing due to environmental conditions (drought, fire, etc.).

Under the no grazing alternative, naturalness would be enhanced, better protected and consistently maintained over time.

c. Maps

See Allotment Map (Appendix 1)

S. WILD HORSES AND BURROS

a. Affected Environment

The Lee Flat Herd Management Area (HMA) is addressed in the CDCA Plan (1980) which identified this HMA with approximately 115,000 acres with an appropriate management level of 30 burros. As a result of the 1994 California Desert Protection Act, Death Valley National Park acquired approximately 45% of the HMA. The only permanent, reliable waters available for the burros occur in the area administered by the National Park Service (NPS), where the NPS actively remove burros under the guidance of their general management plan. There has not been a new AML established for the remaining HMA and the current population estimate for the area is 14 burros.

b. Environmental Consequences

1. Impacts of Proposed Action

Direct and Indirect Impacts:

There would be no impacts to burros. Currently, there are a few burros within the allotment which spend most of their time within the NPS lands.

Irreversible and Irretrievable Resources:

There would be no irreversible and irretrievable impacts from this action. It is anticipated that the long term management for burros for this area will be re-evaluated in relation to the available waters.

Residual:
Under the current allocation of forage and past management, there is no anticipated residual impacts.

Cumulative Impacts:

The cumulative impacts of renewing the grazing permits should not affect the wild horses and burros with the current forage allocations for all species. However, the cumulative impacts by existing and proposed fencing projects, could impacted the free-roaming nature of wild horses and burros.

Recommended Mitigation:

There is no anticipated mitigation. However, an analysis of the Lee Flat HMA for the future management of burros needs to be assessed before a determination can be made and any mitigation would be evaluated.

2. Impacts of Current Management if different than proposed action

Proposed action the same as Current Management

3. No Grazing

Direct and Indirect Impacts:

There would be the potential for increasing range condition. An evaluation would be done to determine if the available forage would allow for the management of wild burros. Other range improvements, such as water developments would be evaluated for their suitability in the management of burros. Existing fence lines used in the management of cattle grazing would potentially be removed to increase the ability for the free-roaming nature of wild burros. This may determine if management of wild burros to the Lee Flat area would be warranted.

Irreversible and Irretrievable Resources:

No irreversible and irretrievable resources are anticipated.

Residual:

There would be the potential for increasing range condition which may allow for the reintroduction of wild burros due to the increased available forage.

Cumulative Impacts:

If other grazing lease renewals are not renewed, the same impacts as described in the direct and indirect impacts for this section, but to a larger scale for other herd management areas.

Recommended Mitigation:

None

T. WILDLIFE, including T&E

a. Affected Environment

Nelson bighorn sheep (Ovis canadensis nelsoni) and mule deer (Odocoileus hemionus) occur in the Hunter Mountain allotment. Mountain quail also live in the area. Key forage species used by both wildlife and cattle consist of *Sphaeralcea sp.* (Mallow), *Atriplex confertifolia* (Shadscale), *Menodora spinescens,* and *Eriogonum sp.*(Buckwheat).

No survey or monitoring studies have been conducted.

Small seeps may exist in the area, but nothing large or accessible enough to attract cattle.

Threatened or Endangered Species:

No federally listed T&E wildlife species occur.

b. Environmental Consequences

1. Impacts of Proposed Action and Current Management

The proposed action involves trailing cattle across the southeast part of the allotment in the fall and spring to go to and from winter range in Lee Flats to the east of the Hunter Mountain allotment. The impact to wildlife would be negligible. If snows are heavy during the winter, some cattle could drift down to the west into the Hunter Mountain allotment. Drift could occur in the east central part of the allotment and would likely be no more that a dozen animals. Drift of this number of cattle would have a negligible impact on wildlife. Since only small, undocumented seeps occur in the area, the allotment is too dry to attract cattle.

Death Valley National Park manages much of the historic allotment and authorizes grazing on the eastern portion. The current allotment is lacking in water sources. The rancher is now allotted 3 active AUMs for the winter grazing season and 4 active AUMs for the spring grazing season. Cattle use has been light in the past few years because of the lack of water. Only a small part of the Malpais Mesa has received light use.

2. No Grazing

No negative impacts on wildlife

3. Cumulative Impacts

None

U. VEGETATION

a. Affected Environment

The Hunter Mountain Allotment is located at the southwestern edge of the Great Basin Floristic Province as described in the *Jepson Manual, Higher Plants of California*. It is adjacent to the California Floristic Province and the Desert Floristic Province. This has resulted in components from all three of these provinces occurring in the area. Most of the allotment supports what Sawyer and Keeler-Wolf in *A Manual of California Vegetation* describe as vegetation series (now called alliances) dominated by shrubs. These shrub series typically support an herbaceous layer

that may include less than a dozen species of perennial grasses and forbs. In addition the herbaceous layer usually includes an extremely diverse number of annual forbs and up to five species of annual grasses.

There is a high diversity of species in the Hunter Mountain Allotment. The average site sampled for the rangeland health assessments had over 25 species of perennial plants. Great basin species such as big sage (*Artemesia tridentata*), spiny menodora (*Menodora spinescens*), winter fat (*Krascheninnikovia*(*Eurotia*) *lanata*), spiny hop sage(*Grayia spinosa*), shadscale (*Atriplex confertiafolia*) and bud sage (*Artemesia spinescens*) are common species in the allotment.

b. Environmental Consequences

1. Impacts of Proposed Action and Current Management

Direct and Indirect Impacts:

Current livestock use levels are very low and use is very dispersed. The rangeland health determination concluded that the allotment meets health standards. Under the proposed action the allotment would continue to meet standards.

Irreversible and Irretrievable commitment of Resources:

The vegetation removed by grazing is renewable on a sustained basis at moderate grazing levels.

Residual:

There would be continued utilization of renewable vegetation resources.

Cumulative Impacts:

None

Recommended Mitigation:

None

2. No Grazing

Direct and Indirect Impacts:

No annual or perennial vegetation would be trampled or removed by cattle. There would not be any expected changes in vegetation composition as a result of the removal of domestic livestock.

Irreversible and Irretrievable commitment of Resources:

With no grazing there would be no use of vegetation by domestic livestock.

Residual:

The same as Direct and Indirect Impacts

Cumulative Impacts:

Cattle grazing would cease to contribute to impacts vegetation in the Hunter Mountain Allotment. There would continue to be some impacts to vegetation from burros, human and natural events in the region.

Recommended Mitigation:

None

c. References

Listed at the end of the document

CHAPTER 4

Participating staff:

Lead Writer: Sam T. Fitton — Botanist
Name **Title**

Participating Staff	Resource Specialty
Donald Storm	Archeologist
Glen Harris	Soil, Air, and Water, & Vegetation
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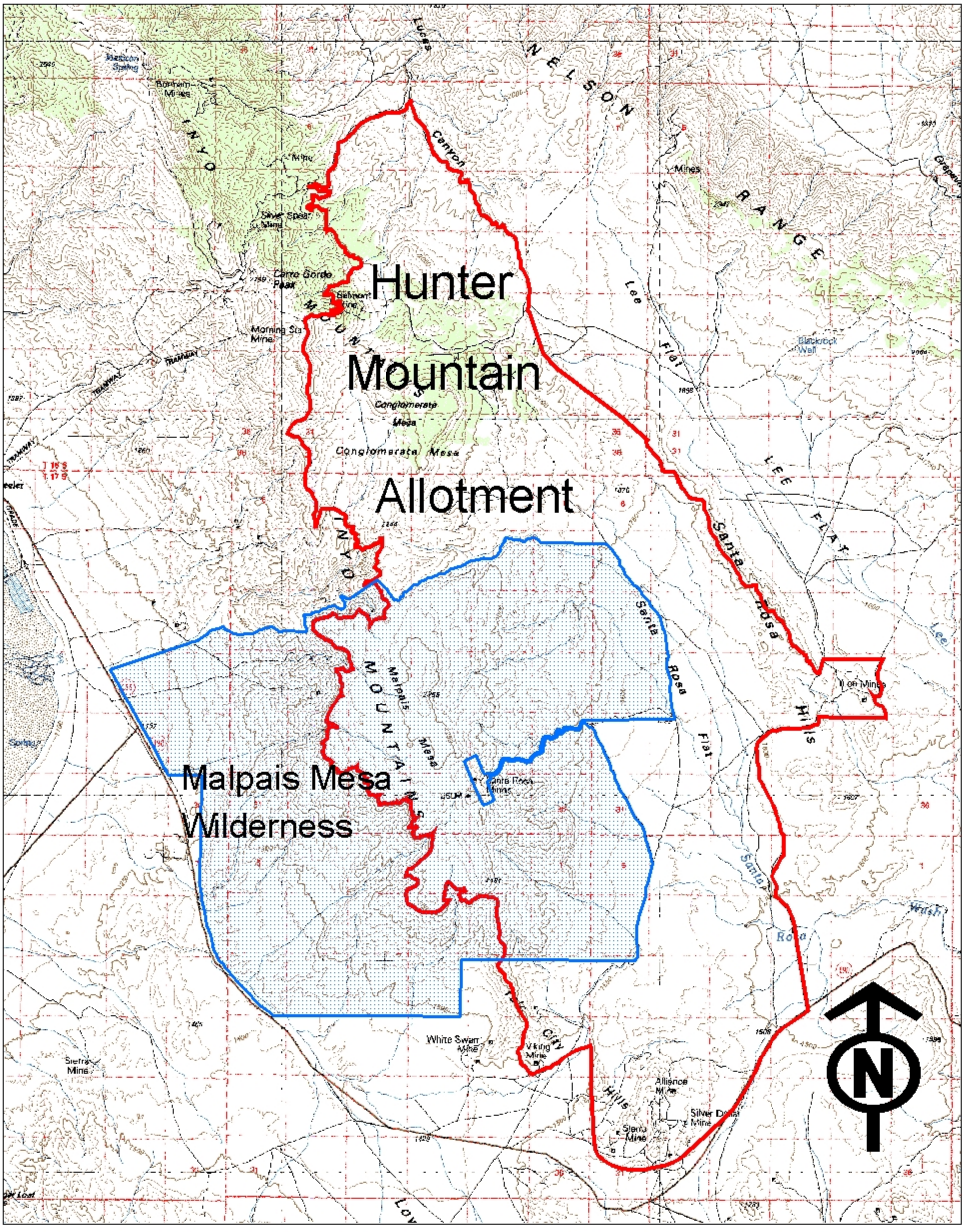
Peter Graves	Environmental Coordinator
Alex Niebergs	Wild Horse & Burro Specialist
Martha Dickes	Wilderness Specialist
Craig Beck	Recreation Specialist
David Sjaastad	Resources Branch Chief

APPENDIX 1

ALLOTMENT MAP

Hunter Mountain Allotment



APPENDIX 2
FORAGE SPECIES
PROPER USE FACTORS

APPENDIX 2
PROPER USE FACTORS FOR FORAGE SPECIES
IN THE RIDGECREST FIELD OFFICE AREA

Proper Use Factors (P.U.F.'s) are related as a percentage of plant that is allowed to be grazed. Usually an average is taken from sampling a local population at a site.

PLANT- SCIENTIFIC NAME	COMMON NAME	P.U.F.
	TREES & SHRUBS	
Acamptopappus sphaerocephalus	Goldenhead	10
Ambrosia dumosa	Burrobush	10
Artemesia spinescens	Budsage	20
Artemesia tridentata	Great Basin Sage	<5
Atriplex canescens	Four-wing Saltbush	40
Atriplex confertifolia	Shadscale	10
Atriplex hymenelytra	Desert Holly	<5
Atriplex polycarpa	Cattle Spinach	20
Chrysothamnus nauseosa	Rubber Rabbit Brush	<5
Chrysothamnus viscidiflorus	Green Rabbit Brush	<5
Coleogyne ramosissima	Blackbrush	<5
Encelia farinosa	Brittlebrush	<5
Ephedra nevadensis	Nevada joint fir, Mormon Tea	30
Ephedra viridis	Mountain joint fir	20
Ericameria cooperi	Goldenbush	0
Ericameria linearifolius	Linear-leaved Goldenbush	<5
Eriogonum fasiculatum	California buckwheat	20
Eriogonum wrightii	Wright's buckwheat	40
Grayia spinosa	Spiny Hopsage	30

Gutierrezia sarothrae	Snakeweed	0
Hymenoclea salsola	Cheesebush	<5
Isomeris arborea	Bladder-pod	10
Juniperus californica	California Juniper	0
Juniperus occidentalis	Western Juniper	0
Juniperus osteosperma	Utah Juniper	0
Krascheninnikovia lanata	Winter Fat	40
Larrea tridentate	Creosote bush	0
Lepidium fremontii	Desert Alyssum	<5
Lepidospartum squamatum	Scale-broom	<5
Lycium andersonii	Anderson thornbush	10
Lycium cooperi	Peach thornbush	10
Machaeranthera tortifolia	Desert aster	20
Menodora spinescens	Spiny menodora	20
Opuntia basilaris	Beavertail cactus	0
Psorothamnus fremontii	Indigo brush	10
Salazaria mexicana	Paperbag bush	10
Salix lavaegata	Red Willow	10
Salvia dorii	Purple Sage	10
Senna armata	Desert cassia	<5
Stephanomeria pauciflora	Desert Straw	30
Tetradymia spinosa var. *longispina*	Cotton felt-thorn	0
Yucca brevifolia	Joshua tree	<5
FORBS		
Mirabilis bigelovii	Wishbone bush	40

Sphaeralcea ambigua	Desert Mallow	40
	GRASSES	
Achnatherum hymenoides	Indian Rice Grass	50
Achnatherum speciosa	Desert Needlegrass	50
Distichilis spicata	Saltgrass	30
Erioneuron pulchellum	Fluffgrass	20
Hilaria jamesii	Galleta grass	50
Poa scabrella	Pine bluegrass	50
Sitanion hystrix	Squirrel-tail	40
Sporobolus airoides	Alkali Sacaton	40

References:

1. Appendix XIII, Volume F of Final Environmental Impact Statement and Proposed Plan for the California Desert Conservation Area, Sept. 1980
2. Plant Checklist for BLM Ridgecrest, CA Field Office Area, 2006

APPENDIX 3
SUPPLEMENTAL PROCEDURES FOR LIVESTOCK GRAZING PERMIT/LEASE RENEWALS

SUPPLEMENTAL PROCEDURES FOR
LIVESTOCK GRAZING PERMIT/LEASE RENEWALS

A CULTURAL RESOURCES AMENDMENT
TO
THE STATE PROTOCOL AGREEMENT

BETWEEN

CALIFORNIA BUREAU OF LAND MANAGEMENT
AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

The purpose of this amendment is to address the National Historic Preservation Act (NHPA) Section 106 compliance procedures for processing approximately 400 grazing permit/lease (hereafter "permit") renewals scheduled for 2004 through 2008. This amendment shall cover grazing permit renewals for livestock as defined in 43 CFR 4100.0-5 as "….domestic livestock – cattle, sheep, horses, burros, and goats." The following procedures will allow for renewal of the permits while maintaining compliance with the NHPA. Alternative approaches to this amendment may be developed by individual Field Offices, but such approaches shall fall under the Section 106 regulations of the NHPA (36 CFR Part 800) and shall require individual Field Office consultation with the SHPO.

These supplemental procedures are an amendment to the State Protocol dated April 6, 1998, which is scheduled for termination on October 25, 2004. These supplemental procedures will remain in effect when that Protocol is terminated and will become an amendment to a successor Protocol document.

This amendment deviates from the Protocol in *Section VI. Thresholds for SHPO Review*, which states, "*BLM shall complete the inventory, evaluation and assessment of effects and document all findings, including negative inventories and no effect determinations, in BLM files before proceeding with project implementation.*" This amendment would allow for renewal of an existing grazing permit prior to completing all NHPA compliance needs as long as Protocol direction, the BLM 8100 Series Manual guidelines (Protocol Amendment F), and the following specific stipulations are followed:

I. Planning

Grazing permit renewals of any acreage size shall be scheduled for cultural resource compliance coverage over the next ten years. Such long term management includes scheduling for inventory, evaluation, treatment, and monitoring, as appropriate. Schedules for inventories of all renewals to be covered by this amendment shall be delineated by each participating Field Office and submitted to the SHPO and the State Office at the first annual reporting cycle for FY 2004.

This amendment shall only apply to the reissuance of grazing permit authorizations and existing range improvements. All new proposed undertakings for range improvements shall follow the established procedures within the Protocol or 36 CFR 800, the implementing regulations for Section 106 of NHPA.

II. Inventory Methodology

To address the impacts of grazing on cultural resources, a Class II sampling or reconnaissance survey strategy shall be devised by the cultural resource specialist in consultation with range staff

which focuses inventory efforts on areas where livestock are likely to concentrate within areas of high sensitivity for cultural resource site locations. Congregation areas where it has been shown that the greatest levels of impact are likely to occur are generally around springs, water courses, meadows, and range improvement areas such as troughs and salting areas.

All existing range improvements within areas of high sensitivity for the location of cultural resource sites shall be inventoried. However, due to the fact that cattle trailing occurs along fence lines and the area of impact is limited to a one meter wide swath and impacts to cultural resources are generally restricted to this corridor, existing linear improvements will not be inventoried except in areas of high sensitivity for the location of cultural resource sites.

Salting areas may change from season to season making locating these areas problematic. Salting locations will be assessed by the cultural resource specialist in consultation with range staff and the permitee. The permitee will be asked to provide a map designating salting areas and these locations will be inventoried if they occur in areas where the probability for the occurrence of cultural resources is high. All livestock loading and unloading areas and corral areas will also be inventoried within areas of high sensitivity for the location of cultural resources.

A Class I records search will also be conducted for each allotment to ascertain previously recorded site locations and areas of prior survey coverage which can be accepted as meeting current standards. Sites located within livestock congregation areas will be visited to evaluate grazing impacts.

All areas identified for inventory in the survey strategy shall be covered intensely. All unrecorded site locations will be recorded and a report of findings for each allotment will be completed. These investigations shall only address public lands administered by BLM. Private, state and county in-holdings will not be evaluated.

III. Tribal and Interested Party Consultation

Field Offices will be responsible for contacting and consulting with Tribes and interested parties as outlined in 36 CFR 800 and the 8120 manual guidelines. This will also meet BLM government-to-government responsibilities for consultation.

IV. Evaluation

Determinations of eligibility to the National Register of Historic Places shall only be undertaken on sites or properties where it can be reasonably ascertained or it is ambiguous that range activities will continue to impact sites and further consultation with SHPO could be required.

V. Effect

A. Range undertakings where historic properties are not affected may be implemented under the Protocol without prior consultation with SHPO. These undertakings shall be documented in the Protocol Annual Report.

B. Range undertakings where historic properties are identified within APEs, and where historic values are likely to be affected or diminished by project activities, require consultation with SHPO, and ACHP if necessary, on a case-by-case basis, pursuant to 36 CFR 800.5-6.

VI. Treatment

Standard Protective Measures can include but are not limited to:

A. Fencing or exclosure of livestock from the cultural resource sufficient to ensure long-term protection, according to the following specifications:

1. the area within the exclosure must be inventoried to locate and record all cultural resources; and

2. the exclosure (i.e.) fence must not divide a cultural resource so that a portion is outside of the fence; and

3. the cultural resource specialist will determine the appropriate buffer to be provided between the cultural resource and its exclosing fence.

B. Relocation of livestock management facilities / improvements at a distance from cultural resources sufficient to ensure their protection from concentrated grazing use.

C. Removal of natural attractants of livestock to a cultural resource when such removal, in the judgment of the cultural resource specialist, will create no disturbance to the cultural resource (e.g. removing vegetation that is providing shade).

D. Removal of the area(s) containing cultural resources from the allotment.

E. Livestock herding away from cultural resource sites.

F. Use salting and/or dust bags or dippers placement as a tool to move concentrations of cattle away from cultural sites.

G. Locating sheep bedding grounds away from known cultural resource sites.

H. Other protective measures established in consultation with and accepted by SHPO.

The Standard Protective Measures defined above may be used to halt or minimize on-going damage to cultural resources. If the standard protection measures can be effectively applied, then no evaluation or further consultation with SHPO on effects will be necessary. The adopted Standard Protective Measures shall be added to grazing permit "Terms and Conditions" as appropriate for each grazing permit issued or reissued as fully processed permits (completed NEPA analysis, consultation, and decision). The "Terms and Conditions" for each permit may be modified by the addition, deletion, or revision of Standard Protective Measures as described in Section VII of these Supplemental Procedures.

VII. Monitoring

A. Field Offices shall adopt the following monitoring guidelines:

1. monitoring shall be conducted yearly and documented to ensure that prescribed treatment measures are effective; and

2. when damaging effects to cultural resources from grazing activities are ambiguous or indeterminate, Field Offices shall conduct monitoring, as necessary, to determine if degrading effects are resulting from grazing activities and if they are continuing to affect the characteristics that may make properties eligible to the NRHP or if they are otherwise adversely affecting the values of cultural resources.

B. When monitoring has yielded sufficient data to make effect determinations, the following apply:

1. When no additional degrading damage will likely occur because standard treatment measures are adequate to prevent further damage from rangeland management activities, SHPO consultation on a case-by-case basis is unnecessary.

2. When no additional degrading damage will likely occur, even without implementation of standard treatment measures, then no further treatment consideration of those resources is necessary, even if past grazing impacts to the ground surface are evident.

3. When additional degrading damage will likely occur, mitigation of adverse effects shall be addressed on a case-by-case basis, pursuant to 36 CFR 800.5-6.

When monitoring results or case-by-case consultation result in a determination concerning addition or deletion of Special Treatment Measure(s) for a specific allotment, then that Measure(s) will be added to, or deleted from, the Terms and Conditions of the fully processed permit for that allotment.

VIII. Disagreements

When a Field Office Cultural Heritage staff and Field Office Manager fail to agree on inventory, evaluation, monitoring, and application of Special Treatment Measures, then the Field Office Manager shall initiate consultation with the SHPO.

IX. Reporting and Amending

A. Each participating Field Office shall report annually to the SHPO and the State Office, a summary of activities carried out under this amendment to the Protocol during the previous fiscal year. The reporting shall be included in the Protocol Annual Report.

B. Annual reports shall summarize activities carried out under this amendment. These reports are not meant to be compilations of the individual project reports prepared for the range projects; they are meant to be programmatic summaries of data and significant findings.

C. Annual reporting shall include at least three major sections:

1. schedules and status of accomplishments in meeting schedules for cultural resource activities in relation to the range management program as identified in Stipulation I; and

2. results, as annual summaries of accomplishment and significant findings resulting from rangeland management cultural resource activities; and

3. appendices to the report that would include project, coverage and cultural resource location maps and tabular summaries of total number of cultural resources located, new cultural resources located, cultural resources evaluated, types of treatment measures employed at each location, and cultural resources monitored.

D. Annual reports may contain recommendations for new or revised treatment measures.

E. Either party to this agreement may initiate a process to negotiate new or revised treatment measures or to revise the schedule of inventories. When such a process is initiated, the parties to this agreement shall negotiate new or revised treatment measures or schedule of inventories and such revisions or additions shall be issued as Attachments to these Supplemental Procedures.

STATE DIRECTOR, BUREAU OF LAND MANAGEMENT, CALIFORNIA

_/s/ james wesley abbott *for*_____

By Mike Pool Date: 8/17/04

STATE HISTORIC PRESERVATION OFFICER, CALIFORNIA

_/s/ milford wayne donaldson_____

By Milford Wayne Donaldson Date: 8/18/2004

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